Having thus described the preferred embodiments, the invention is now claimed to be:

- 1. A decontamination system for an enclosure comprising ductwork for transporting air to a plurality of regions of the enclosure, the system comprising:
- a means for circulating air through a ductwork 5 system;
  - a means for supplying decontamination vapor to the ductwork system to be circulated therethrough.
  - 2. The system as set forth in claim 1 further including controllable baffles disposed adjacent registers between the ductwork and rooms.
  - 3. The system as set forth in claim 2 further including at least one of temperature, vapor concentration, and flow rate monitors disposed in conjunction with the controllable baffles.
  - 4. The system as set forth in claim 3 further including:
  - a decontamination controller connected with the controllable baffles, the monitors, and the means for circulating air through the ductwork for automatically controlling a decontamination cycle.

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- 5. The system as set forth in claim 4 wherein the decontamination controller includes:
- a processor which is preprogrammed to optimize and implement a decontamination cycle which includes flowing vapor through the system in one direction, allowing the vapor to stagnate in the system, and flow the vapor in an opposite direction.
  - 6. The system as set forth in claim 4 wherein the decontamination controller controls at least the

baffles and the means for circulating air through the ductwork to create turbulent flow.

- 7. The system as set forth in claim 1 wherein the means for supplying decontamination vapor includes: a hydrogen peroxide vapor generator.
- 8. The system of claim 1, wherein the enclosure comprises a building or portion thereof and the regions comprise rooms.
- 9. The system as set forth in claim 2, further including:
- at least one of the controllable baffles including a temporary baffle which is selectively inserted into a portion of the ductwork system.
  - 10. A method of decontaminating buildings comprising:

circulating a vapor decontaminant through HVAC ductwork and associated rooms.

- 11. The method as set forth in claim 10 wherein the vapor decontaminant includes hydrogen peroxide vapor.
- 12. The method as set forth in claim 11 further including:

circulating the hydrogen peroxide vapor through the ductwork in one direction,

circulating the hydrogen peroxide vapor through the ductwork in an opposite direction, and

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allowing the hydrogen peroxide vapor to dwell in the ductwork.

13. The method as set forth in claim 12 further including:

automatically opening and closing baffles at registers between the HVAC ductwork and individual rooms.

14. The method as set forth in claim 13 further including:

monitoring at least one of temperature, flow velocity, and vapor concentration; and

controlling the opening and closing of the baffles in accordance with the monitoring.

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15. The method as set forth in claim 10 further including:

creating turbulent flow in the ductwork.

- 16. The method as set forth in claim 10 wherein the HVAC ductwork includes a plurality of independent HVAC ductwork subsystems, the method further including:
- decontaminating HVAC subsystems more remote from a contamination site within the building and progressively decontaminating HVAC subsystems closer to the contamination site.
  - 17. The method as set forth in claim 10, further including:

connecting a temporary baffle with the ductwork; and

controlling the temporary baffle to control the flow of vapor decontaminant from the ductwork to at least one of the regions.